

IN THE CLAIMS:

1. (Currently Amended) A computer-implemented method for distributed fair scheduling comprising:

tagging a packet with a start tag based on a time value;  
determining a back-off interval based on at least the start tag of the packet;  
counting from the back-off interval to a predetermined transmission time; and,  
transmitting the packet upon counting from the back-off interval to the predetermined transmission time.

2. (Currently Amended) The method of claim 1, further comprising:  
determining whether a collision occurred between the packet and another packet; and  
upon determining that a collision occurred, determining a new back-off interval, and  
transmitting the packet upon counting from the new back-off interval to ~~the~~ a new predetermined transmission time.

3. (Original) The method of claim 1, further initially comprising receiving the packet at a node for transmission therefrom.

4. (Original) The method of claim 1, further initially comprising resetting a virtual clock.

5. (Original) The method of claim 4, further comprising updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.

6. (Original) The method of claim 4, wherein determining a back-off interval comprises determining the back-off interval based on also the virtual clock.

7. (Original) The method of claim 1, wherein tagging a packet with a start tag comprises determining the start tag as greater of a virtual clock and a finish tag of a previous packet.

8. (Currently Amended) The method of claim 1, wherein the predetermined transmission time ~~comprises~~ is zero.
9. (Original) A computer-implemented method for distributed fair scheduling comprising:  
tagging a packet with a start tag set as greater of a virtual clock and a finish tag of a previous packet;  
determining a back-off interval based on at least the virtual clock and the start tag of the packet;  
counting from the back-off interval to a predetermined transmission time; and,  
transmitting the packet upon counting from the back-off interval to the new predetermined transmission time.
- A3 10. (Currently Amended) The method of claim 9, further comprising:  
determining whether a collision occurred between the packet and another packet; and,  
upon determining that a collision occurred, determining a new back-off interval, and  
transmitting the packet upon counting from the new back-off interval to ~~the~~ a new predetermined transmission time.
11. (Original) The method of claim 9, further comprising updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.
12. (Currently Amended) A computerized system comprising:  
a link through which packets are transmitted; and,  
a plurality of nodes, each node transmitting a packet through the link when a counting from a back-off interval for the packet reaches a predetermined transmission time,  
wherein the back-off interval for each packet is based on a start tag of the packet and a virtual clock maintained by the node of the packet;  
wherein the start tag is based on a time value.

13. (Original) The system of claim 12, wherein each node comprises a controller at which the packet for the node is received for transmission through the link.

14. (Currently Amended) The system of claim 12, wherein the predetermined transmission time ~~comprises~~ is zero.

15. (Currently Amended) A computer comprising:  
at least one application generating one or more packets for transmission through a link operatively coupled to the computer; and,

a controller to receive each packet as generated by the at least one application; and to transmit each packet through the link when a counting from a back-off interval reaches a predetermined transmission time,

wherein the back-off interval for each packet is based on a start tag of the packet and a virtual clock maintained by the controller;

wherein the start tag is based on a time value.

16. (Currently Amended) The computer of claim 15, wherein the predetermined transmission time ~~comprises~~ is zero.

17. (Currently Amended) A machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising:

tagging a packet with a start tag based on a time value;

determining a back-off interval based on at least the start tag of the packet;

counting from the back-off interval to a predetermined transmission time; and,

transmitting the packet upon counting from the back-off interval to the predetermined transmission time.

18. (Currently Amended) The medium of claim 17, wherein the method further comprises:  
determining whether a collision occurred between the packet and another packet; and,

upon determining that a collision occurred, determining a new back-off interval, and transmitting the packet upon counting from the new back-off interval to ~~the~~ a new predetermined transmission time.

19. (Original) The medium of claim 17, wherein the method further initially comprises receiving the packet at a node for transmission therefrom.

20. (Original) The medium of claim 17, wherein the method further initially comprises resetting a virtual clock.

21. (Original) The medium of claim 20, wherein the method further comprises updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.

22. (Original) The medium of claim 20, wherein determining a back-off interval comprises determining the back-off interval based on also the virtual clock.

23. (Original) The medium of claim 17, wherein tagging a packet with a start tag comprises determining the start tag as greater of a virtual clock and a finish tag of a previous packet.

24. (Currently Amended) The medium of claim 17, wherein the predetermined transmission time ~~comprises~~ is zero.

25. (Original) A machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising:

tagging a packet with a start tag set as greater of a virtual clock and a finish tag of a previous packet;

determining a back-off interval based on at least the virtual clock and the start tag of the packet;

counting from the back-off interval to a predetermined transmission time; and,  
transmitting the packet upon counting from the back-off interval to the predetermined transmission time.

26. (Currently Amended) The method of claim 25, wherein the method further comprises:  
determining whether a collision occurred between the packet and another packet; and,  
upon determining that a collision occurred, determining a new back-off interval, and  
transmitting the packet upon counting from the new back-off interval to ~~the~~ a new predetermined transmission time.

A3 27. (Original) The medium of claim 25, wherein the method further comprises updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.

28. (New) A computer-implemented method for distributed fair scheduling, the method comprising:  
resetting a virtual clock;  
tagging a packet with a start tag;  
determining a back-off interval based on at least the start tag of the packet;  
counting from the back-off interval to a predetermined transmission time;  
transmitting the packet upon counting from the back-off interval to the predetermined transmission time; and  
updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.

29. (New) The method of claim 28, further comprising:  
determining whether a collision occurred between the packet and another packet;  
and

upon determining that a collision occurred, determining a new back-off interval and transmitting the packet upon counting from the new back-off interval to a new predetermined transmission time.

30. (New) The method of claim 28, further comprising receiving the packet at a node for transmission therefrom.

31. (New) The method of claim 28, wherein determining a back-off interval comprises determining the back-off interval also based on the virtual clock.

32. (New) The method of claim 28, wherein the predetermined transmission time is zero.

A3 33. (New) A computer-implemented method for distributed fair scheduling, the method comprising:

tagging a packet with a start tag;

determining a back-off interval based on at least the start tag of the packet;

counting from the back-off interval to a predetermined transmission time; and

transmitting the packet upon counting from the back-off interval to the

predetermined transmission time;

wherein tagging a packet with a start tag comprises determining the start tag as a greater of a virtual clock and a finish tag of a previous packet.

34. (New) The method of claim 33, further comprising:

determining whether a collision occurred between the packet and another packet; and

upon determining that a collision occurred, determining a new back-off interval and transmitting the packet upon counting from the new back-off interval to a new predetermined transmission time.

35. (New) The method of claim 33, further comprising receiving the packet at a node for transmission therefrom.
36. (New) The method of claim 33, further comprising resetting a virtual clock.
37. (New) The method of claim 36, further comprising updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.
38. (New) The method of claim 36, wherein determining a back-off interval comprises determining the back-off interval also based on the virtual clock.
39. (New) The method of claim 33, wherein the predetermined transmission time is zero.
- A3 40. (New) A machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising:
- resetting a virtual clock;
  - tagging a packet with a start tag;
  - determining a back-off interval based on at least the start tag of the packet;
  - counting from the back-off interval to a predetermined transmission time;
  - transmitting the packet upon counting from the back-off interval to the predetermined transmission time; and
  - updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.
41. (New) The medium of claim 40, wherein the method further comprises:
- determining whether a collision occurred between the packet and another packet;
- and

upon determining that a collision occurred, determining a new back-off interval and transmitting the packet upon counting from the new back-off interval to a new predetermined transmission time.

42. (New) The medium of claim 40, wherein the method further comprises receiving the packet at a node for transmission therefrom.

43. (New) The medium of claim 40, wherein determining a back-off interval comprises determining the back-off interval also based on the virtual clock.

44. (New) The medium of claim 40, wherein the predetermined transmission time is zero.

A3 45. (New) A machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising:

tagging a packet with a start tag;  
determining a back-off interval based on at least the start tag of the packet;  
counting from the back-off interval to a predetermined transmission time; and  
transmitting the packet upon counting from the back-off interval to the predetermined transmission time;

wherein tagging a packet with a start tag comprises determining the start tag as a greater of a virtual clock and a finish tag of a previous packet.

46. (New) The medium of claim 45, wherein the method further comprises:

determining whether a collision occurred between the packet and another packet;  
and

upon determining that a collision occurred, determining a new back-off interval and transmitting the packet upon counting from the new back-off interval to a new predetermined transmission time.



In re Appln. of VAIDYA et al.  
Application No. 09/415,901

47. (New) The medium of claim 45, wherein the method further comprises receiving the packet at a node for transmission therefrom.
48. (New) The medium of claim 45, wherein the method further comprises resetting a virtual clock.
49. (New) The medium of claim 48, wherein the method further comprises updating the virtual clock to the start tag of the packet upon determining that the start tag exceeds the virtual clock.
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50. (New) The medium of claim 48, wherein determining a back-off interval comprises determining the back-off interval also based on the virtual clock.
51. (New) The medium of claim 45, wherein the predetermined transmission time is zero.
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